Payload Turnover to KSC

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Integration Data Package

- Definition
  - A compilation of documents that provides a complete status of payload hardware at time of turnover
- IDP
  - Payload Customer should have IDP ready approximately 1 week (several days for Middecks) prior to turnover for KSC review
  - Given to KSC as part of the turnover of the payload hardware to KSC custody
  - Used by KSC for KSC on-line payload integration and test activities
  - Checklist and contents shown on following charts
- Pre-turnover Inspection (N/A for Middecks)
  - Applies to all items being turned over to KSC
  - Non-conforming items identified in Pre-turnover Inspection Checklist
  - PGOC QA and NASA QA establish integrity control of hardware after inspection.
- Turnover Meeting
  - Formal meeting to give custodial responsibility of payload hardware to KSC
  - Address open items/issues/nonconformances
  - Turnover certificate signed by KSC, Payload Customer and Mission Manager representative or ISS Payloads Office representative

IDP Checklist

1. Title Page (Signed by Customer and Mission Manager Representative or ISS Payloads Office Representative)
2. Index
3. Copy of Shipping/Transferring Document (DD 250/DD 1149)
4. Notes/Comments (Optional)
5. All waivers/deviations affecting integration only
6. List of shortages
7. All open nonconformance reports and only closed nonconformance reports affecting integration.
8. List of deferred or open work. (open work not documented via OMRSD/TGHR or drawings)
9. Identifications/drawings
10. Limited operating life/age sensitive items
11. Pyrotechnic Data
12. Non-flight hardware
13. Proofload/calibration Data/Diagrams
14. Operating Test Procedures
15. Cleanliness Certification
16. Open items from the Phase III Ground Safety Review
17. Weight and Center of Gravity (CG)

*New items currently being added include software version and IDP return preference

Integration Data Package Contents

1. TITLE PAGE:

   Title page will identify the item being delivered and will be signed by the customer, and the Mission Manager representative or the ISS Payloads Office representative.

2. INDEX:

   Table of Contents listing all sections. For sections of an IDP which are not applicable to the hardware being turned over, a statement should be inserted indicating the section is not applicable.

3. COPY OF SHIPPING/TRANSFERRING DOCUMENT:

   Documentation of shipment as it was transported to KSC, with flight and GSE items to be turned over clearly identified.

4. NOTES/COMMENTS (CUSTOMER's OPTION):

   Important information that the customer wants to assure that KSC is aware of. This could be specific constraints on the operations of the hardware, or repair limitations. It should also include any unusual conditions.

5. WAIVERS/DEVIATIONS AFFECTING INTEGRATION:

   Copies of waivers/deviations that affect KSC integration.

6. LIST OF SHORTAGES: (Shipped Short)

   A listing of hardware/software which is required for integration at KSC, but not being delivered at this time.

Integration Data Package Contents (cont'd)

7. NONCONFORMANCE REPORTS (NCR'S):

   A list and a copy of all open nonconformance items (Discrepancy Reports, problem Reports, etc.) and only closed nonconformance items that affect KSC integration. Open nonconformances listed in this section need not be repeated in Section 8.

8. LIST OF DEFERRED OR OPEN WORK:

   A listing of unplanned tasks that should have been completed by the customer prior to turnover to KSC (DEFERRED) and a list of planned agreed-to work that is not documented via the OMRSD, TGHR Table, or drawings (OPEN). Both OPEN and DEFERRED work must be negotiated with KSC prior to turnover. Released engineering must accompany these items. Nonconformance reports (NCRs) listed in item 7 do not need to be repeated here.

9. IDENTIFICATIONS/DRAWINGS:

   The As-Built Configuration List (ABCL) which describes the hardware being turned over to KSC. This identification shall be at the top-assembly level (including all modifications), and shall reflect the official ECL used for integration.

   All customer provided drawings required for KSC integration should be included.

   A detailed diagram of the front face of middeck payloads will be provided for use as a payload function/status reference during final countdown operations.

Integration Data Package Contents (cont'd)

10. LIMITED OPERATING LIFE/AGE SENSITIVE ITEMS:

A listing of hardware which may require documenting the number of times the item has been used or operated or that are time-critical as to their usefulness or ability to perform their required function. This list should also include any specific forms/logs that KSC will be required to update/track. All tracking requirements must also be identified in the OMRSD. Information addressing the allowable and/or remaining time/cycles, or shelf life should also be included.

11. PYROTECHNIC DATA:

Information of any pyrotechnics installed on the customer hardware. This information will include verification data, installation drawings, checkout information or constraints, the lot certification reflecting the current status at the time of delivery. Documented evidence that representatives of both NASA and the procuring agency have reviewed and accepted the described pyrotechnic device.

12. NON-FLIGHT HARDWARE:

A listing of all non-flight items (by name, quantity, and location) installed on the hardware at the time of turnover. KSC red streamers shall be installed (when applicable per SPP Q-02) after turnover.

13. PROOFLOAD/CALIBRATION DATA AND DIAGRAMS:

Data on GSE that may require proofloading or calibration. These items MUST be within calibration or proofload prior to turnover to KSC and must have the proper proofload drawings included in the IDP. If at all practical, user-provided GSE will be recertified by the customer prior to use at KSC. Future proofload/calibration requirements should be noted with the intervals identified, or if recertification is not required GSE will be clearly labeled as such. Items turned over to KSC that do not require calibration will have KSC Form 22-418, Calibration Not Required, stickers applied after turnover. Identify any special equipment required for proofload/calibration.

Integration Data Package Contents (cont'd)

14. OPERATING TEST PROCEDURES:

Procedures developed by the customer which may be of use to KSC for developing KSC procedures for planned operations, processing, or contingency operations. If these procedures have already been transmitted to KSC, a procedure listing and submittal statement indicating such is required.

For middeck payloads, a nominal configuration checklist will be provided along with an off-nominal troubleshooting list for use by KSC during final countdown operations in the event of minor payload problems (alarms, error messages, etc.) after the IVT has been completed.

15. CLEANLINESS CERTIFICATION:

A statement that the hardware being turned over to KSC meets cleanliness specifications set forth by the Mission Manager or ISS Payloads Office for the applicable mission.

16. OPEN ITEMS FROM PHASE III GROUND SAFETY REVIEW:

All open items from the ground safety review must be closed out before operations at KSC can begin. If an item is not closed, a determination in writing will be provided to identify all hazardous conditions during the KSC integration process.

17. WEIGHT AND CENTER OF GRAVITY:

Weight and center of gravity location must be provided. For experiments installed in Orbiter middeck lockers, the weight and center of gravity should be determined with the experiment (and any inserts) installed in the locker.